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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,187	07/03/2003	Ren Hong Wang	0275Y-361COC	6515

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EXAMINER
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TAMAI, KARL I

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/613,187

Applicant(s)

WANG, REN HONG

Examiner

Tamai IE Karl

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-13, 21 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-20 and 23-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/27/03</u> . | 6) <input type="checkbox"/> Other: _____  |

***Election/Restrictions***

1. Applicant's election without traverse of Group II in Paper dated 12/01/03 is acknowledged.

***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, a two coil per slot motor, the magnetic axis of the coil, and the magnetic neutral zones must be shown or the features canceled from the claims. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to because it is unclear how the armature will rotate with two windings hard wired to the brushes as shown in figure 5. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Specification***

4. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification, such as for example: page 8, line 11 "5<sub>2</sub> and 5<sub>7</sub>" should refer to slots S<sub>2</sub> and S<sub>7</sub>. It is unclear if the

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preferred embodiment has 24 coils 25<sub>1</sub>-25<sub>24</sub> as set forth on page 6; or 12 coils as set forth on page 9, line 8.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 14-20 and 23-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

Claims 14-20 and 23-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not enable or contain a full, clear, concise, and exact written description of the magnetic neutral zones set forth in Claims 14-20 and 23-30 the specification, and the drawings. The commutation zones 30, 32 cannot be in a magnetic neutral zone of the field coil 34 because they are in the middle of the magnetic pole. The pole will be magnetically polarized north or south depending upon the

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direction of current applied to the field coil 34. The motor will not operate as described in the specification.

The specification does not enable or contain a full, clear, concise, and exact written description of a two coil per slot motor as set forth in claims 17-20. The specification only teaches away from the prior art two coil per slot motor, not the use of the armature winding in a two coil/slot motor.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 14-20 and 26-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “magnetic neutral zone” in claims 14-20 and 23-30 is used by the claim to mean “a zone between the field coils”, while the accepted meaning is “an area without a magnetic polarity” (neutral: “not one thing or the other”, Webster’s II New Riverside University Dictionary; therefore magnetically neutral is not magnetized north or south). The term is indefinite because the specification does not clearly redefine the term.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 14, 26, 28, 29, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein (US 4,329,610) and Van Assema (US 5,172,870). Klein teaches a machine having armature with a plurality of coils with series wound subcoils, where the coils are commutated while passing the neutral zone (the center of the pole). Klien teaches all of the coils being commutated at the center of the pole. Klien teaching the subcoils overlapping at a central slot on the armature. Klein shows in the figures that one subcoil is advanced of the field pole and one retarding during commutation (figure 2A, 2B). Klein does not specifically teach the stator having field coils. Van Assema teaches the stator poles created by a plurality of field coils. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Klein with the field coils of Van Assema to provide a serially wound motor.

11. Claims 15, 16, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein (US 4,329,610) and Van Assema (US 5,172,870), in further view of Latour (US 841,545). Klein and Van Assema teach every aspect of the invention except one subcoil having 3 times the turns as the other. Latour teaches two subcoils where one has three time the turns and the other (see figure 8). It would have

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been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Klein and Van Assema, with the subcoils having three times the number of turns, as the other to eliminate short circuit currents and reduce excessive heat.

12. Claims 17 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein (US 4,329,610) and Van Assema (US 5,172,870). Klein and van Assema teach every aspect of the invention except the coils beginning and ending commutation in the magnetic neutral zone. Klein appears to show the coils only being commutated while the magnetic axis is within the field pole (the magnetic neutral zone). It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Klein and Van Assema to with the coils commutated while in the magnetic axis is in the magnetic neutral zone to efficiently drive the motor and because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (see *In re Aller*, 105 USPQ 233).

### ***Double Patenting***

13. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

14. Claims 23-25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 2 of U.S. Patent No. 6566782. Although the conflicting claims are not identical, they are not patentably distinct from each other because the "offset" coil (first line of the last paragraph in claim 23) is inherently part of the Patented Claim 1 (col. 5, line 39).

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (571) 272 - 2036.

The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Nestor Ramirez, can be reached at (571) 272 - 2034. The facsimile number for the Group is (703) 872 - 9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Karl I Tamai  
PRIMARY PATENT EXAMINER  
February 18, 2004

A handwritten signature in black ink, appearing to read 'Karl I Tamai', with a long, sweeping horizontal line extending to the right.

**KARL TAMAI  
PRIMARY EXAMINER**